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## THE STORY OF MADAME TUSSAUD.

Most persons of the present day only know that estimable lady, Madame Tussaud, as associated with the wax-work exhibition in Baker Street, Portman Square; they little dream of the part she took in the French crisis, nor the position she held in French society.

About the year 1750, John Christopher Curtius was practising his profession of medicine at Bern in Switzerland when the Prince de Conti happened to be sojourning in that city, and having accidentally seen some portraits and anatomical subjects modelled in wax by Dr Curtius, the Prince was struck with the exquisite delicacy and beauty which those ingenious specimens of art displayed, and after complimenting the modeller upon the perfection of his work, invited him to take up his residence in Paris, promising him, if he did so, the patronage of all the influential persons in that great city; and the Prince, as a further incentive, promised to provide suitable apartments for the purpose of modelling and receiving visitors. M. Curtius was of course grateful for the recognition of himself and his art by a royal Prince who was known and acknowledged as one only second in authority to the king his father; and in a very short time after this interview we find him in possession of splendid apartments in the Hôtel d'Allègre, Rue St-Honoré.

In 1760, his sister, Madame Grosholtz, became a widow, and two months afterwards gave birth to a daughter, who was named Marie. The girl was six years of age when her uncle M. Curtius came to Switzerland for the purpose of taking charge of his widowed sister and her children, and conveying them to Paris. The widow had by a previous husband seven sons; but the daughter so won her uncle's affection that he adopted her as his own child, and little Marie looked upon him as a father. At this time, children were in France introduced very early into society, and at eight years of age Marie Grosholtz—who afterwards married a French gentle-

man named Tussaud, and thus became the well-known Madame Tussaud—was allowed to sit at her uncle's table, and was ever in the habit of hearing the conversation of adults and persons possessed of superior talent, for M. Curtius's house had become the resort of the élite, and more especially the literati and artists. Among the most frequent visitors, Madame Tussaud distinctly remembered Voltaire, Rousseau, Dr Franklin, Mirabeau, and Lafayette; and although she was very young when Voltaire and Rousseau died, every circumstance connected with them made a powerful impression on her mind. Early reminiscences are often the most permanent, and when the *amour propre* is flattered by a personal compliment, it remains indelibly impressed upon the mind even in childhood. Thus Madame Tussaud recollected in her extreme age that when she was scarcely nine years old, Voltaire used to pat her on the cheek and call her a pretty little dark-eyed girl.

Marie Grosholtz, or as we must term her, Madame Tussaud, loved her uncle's art, and so closely imitated him, that when she was yet in her teens it was impossible to distinguish between the excellence of their works. At that period, modelling in wax was much in vogue, representations of flowers, fruit, and other subjects being moulded from the originals, and painted with a rare fidelity to life. To such a perfection had Madame Tussaud arrived in giving character and accuracy to her models, that when quite a girl she was intrusted to take casts from the heads of celebrities of that period, who most patiently submitted themselves to the hands of the fair artist. She cast the head of Voltaire only two months before his death.

Amongst members of the royal family who visited M. Curtius's apartments and admired his works and those of his niece, was Madame Elizabeth, the king's sister; and being desirous herself of learning the art of modelling in wax, Madame Tussaud was appointed to teach the Princess, between whom and the skilful modeller sprung up an attachment so warm, that the

former applied to M. Curtius to permit his niece to take up a prolonged residence at the palace of Versailles. The invitation could not be refused, and Madame Tussaud was treated more as an attached friend than as a dependent. She attended all the brilliant assemblies at the royal palace of Versailles, which was then revelling in the acme of its gaiety. In the preceding reign, pleasure, luxury, dissipation, and even debauchery had arrived at their climax; but when Louis XVI. with Marie Antoinette ascended the throne, a higher cultivation of the arts, the improving state of literature, the study of different accomplishments, an increased attention to the various branches of education, all contributed to introduce a greater degree of refinement in the court of Versailles. Madame Tussaud thus came into close association with the highest personages of the realm. She described Marie Antoinette as 'combining every attribute which could be united to constitute loveliness in woman; possessing youth, beauty, grace, and elegance to a degree perhaps never surpassed; a sweetness and fascination in her manners, enchanting all who ever had the happiness to be greeted by her smile, in which there was a witchery that has more than once converted the fury of her most brutal enemies into admiration.'

Madame Tussaud's services were, however, too valuable to her uncle to admit of her remaining long at the palace; so we find her again installed at her uncle's, where, however, during her absence certain changes had taken place. Madame Tussaud found that his guests were different from those she had been wont to meet previously. Formerly, philosophers, professors of literature, arts, and sciences, had resorted to the hospitable dwelling of M. Curtius; these were now replaced by fanatic politicians and demagogues, who were sending forth their anathemas against monarchy, haranguing on the different forms of government, and propounding their extravagant ideas on republicanism. When the royal palace was ruthlessly attacked by the mob, Madame Tussaud was in terrible suspense, having three brothers and two uncles in the Swiss guards who were fighting for the king; and her torturing anxiety led her to the palace when the murderous action of the mob was at its height, to find that all her relatives had been slain.

Amid all the political changes which were taking place, M. Curtius's establishment in Paris was visited by persons of the highest rank; amongst these was Joseph, emperor of Austria, who appeared to be delighted with all he saw. Of other distinguished personages who came to see the celebrated studio was the Emperor Paul Petrovitch of Russia, accompanied by the Empress; also Stanislaus Lyzinski, king of Poland; Gustavus Vasa, king of Sweden; Prince Henry of Prussia, brother to Frederick the Great; the Prince of Asturias, afterwards Charles IV., king of Spain; and many other notable personages.

After the flight of Louis XVI., M. Curtius turned Republican, and was visited by Camille Desmoulins, Santerre, Thomas Paine, Paul Jones, Chabot, General Dumouriez, Marat, Robespierre, &c. Madame Tussaud, having strong loyalist principles, underwent horrible torture of mind whilst these several leaders of the people in their turn slaughtered the royal family and their adherents,

massacred the priests, and committed unheard-of atrocities. But the most touching incident was perhaps the murder of the amiable Princess de Lamballe. When she was led forth from prison, the Jacobins required two oaths from her: 'That she would swear to love liberty and equality, and to hate the king, the queen, and royalty.' She replied: 'I will take the first oath; the second I cannot—it is not in my heart.' Upon which one of the by-standers, wishing to save her, said: 'Do swear!' Some one in the mob shouted: 'Let Madame be set at liberty,' which was the dreadful signal for murder, and the fatal stroke was given. Her head, heart, and hands were paraded on pike-heads about the streets, and eventually the horrid spectacle was displayed to the royal prisoners. The queen seeing it, fainted, exclaiming: 'Our doom is also sealed.' The head of the Princess was taken to Madame Tussaud, whose feelings can be easier conceived than described. The savage murderers stood over, whilst she, shrinking with horror, was compelled to take a cast from the features of the unfortunate victim.

An intense interest was excited in the minds of the people at that time respecting the royal family confined in the Temple. Numbers of people paid high prices for admission to certain rooms, from the windows of which the king and his family could be seen walking in the Temple Gardens. Madame Tussaud was once enabled to obtain that melancholy satisfaction; but felt so pained at the touching sight that she never again desired to witness their misfortunes. Soon after this, Madame Tussaud, her mother, and aunt were carried off in the middle of the night in a *fiacre*, accused of being royalists, and suffered three months' imprisonment in La Force. In the room in which they were confined, were about twenty females, amongst others Josephine, who was then Madame Beauharnais, and afterwards became the French Empress. She had with her a little girl, her only daughter Fanny, who was afterwards married to Louis Bonaparte, and became queen of Holland.

The trial and execution of Louis, the war with England, and the troubles and disorders in France, the queen's execution, &c., are all matters of history with which Madame Tussaud was only too terribly familiar. Many were executed whose heads were cast by this lady; amongst the later ones was the cruel Robespierre, whose mutilated head was brought to her uncle's establishment.

A few months after the execution of Robespierre, Madame Tussaud had the misfortune to lose her uncle, who to the very last persisted that he was a loyalist at heart, but that it was only the very politic conduct which he had pursued that had saved their lives and property. A medical examination proved that his death had been occasioned by poison.

At the commencement of the Napoleonic times and the Consulate, Madame Tussaud was sent for to the Tuileries to take the likeness of Napoleon as First Consul, and was desired to be there at six o'clock in the morning. Accordingly she repaired to the palace at the time stated, and was at once ushered into a room where she found Bonaparte with his wife and Madame Grand-Maison, whose husband was a deputy and partisan of Napoleon's. She was treated with great kindness by Josephine, who conversed freely and with extreme affability

with her, and when she put the liquid plaster upon Napoleon's face, begged that she would be very particular, as her husband had consented to the cast being taken, only at her earnest request, adding that it was for herself that the bust was intended. A few days afterwards, Madame Tussaud took casts of General Massena, Cambracères, and several other French celebrities who were prominent members under the First Consulate.

Peace being temporarily arranged between the English and French governments, Madame Tussaud was desirous of taking the opportunity of visiting England. She endeavoured to get a passport for that purpose; but Fouché the Minister of Police refused to grant one, on the ground that it was contrary to the laws of France for artists to leave the country; and it was only by petitioning the higher authorities that she eventually obtained a *permit*, and to her great delight arrived in London in 1802. 'At last,' says she in her Memoirs, 'I am in a country where genius from whatever clime is fostered, and where the unfortunate exile receives the same protection as the native.' Her talents were justly appreciated by a generous and discerning public, and she was most liberally patronised. She lived amongst us for many years. Young and old alike have over and over again visited her establishment, and the 'history in wax' which is there exhibited has become one of the greatest attractions of the metropolis. Though great changes have since been made, a few specimens of her own special talent are still to be seen in Baker Street; the best being the portrait-model of the famous wit and author Voltaire.

The management of this exhibition is now in the hands of descendants of the second generation, whose efforts to obtain the latest celebrities and notorieties are so well known. The collection at present consists of more than three hundred portrait-models of kings and queens, presidents, statesmen, generals, admirals, poets, actors, &c.; in short, the effigies of celebrities of all nations. The great Emperor Napoleon is a prominent character. The more recent additions to the collection are the Emperor of Russia, the Sultan of Turkey, the various Turkish pashas and Russian officers; a fac-simile of the lying in state of the late Pope Pius IX. at St Peter's, and that of King Victor-Emmanuel. In a dismal room, appropriately called the 'Chamber of Horrors,' are representations of murderers and others who have been executed. Here is to be seen perhaps the most extraordinary relic of the terrible French Revolution—namely the actual knife of the original guillotine used in Paris for the decapitation of Louis XVI., Marie Antoinette, and the best and worst blood of France.

Madame Tussaud closed her 'eventful life' in London in 1850, having been a citizen of the greatest capital in the world for forty-eight years. Her family were noted for longevity, her mother having lived to the age of one hundred and four, and her grandmother to one hundred and eleven; whilst she herself reached the mature age of ninety. Her effigy in the wax-work exhibition in Baker Street is so life-like, that those who knew her personally fancy they still see the veritable old lady; and she has her favourite spot too, for she is apparently guarding what is known as the

'Sleeping Beauty,' of whom there is a touching history. The figure represents Madame St Amaranthe, formerly one of the most lovely women in France. She was the widow of a lieutenant-colonel of the body-guard of Louis XVI., who was killed in the attack on the Tuileries in 1792.

## HELENA, LADY HARROGATE.

### CHAPTER XLIV.—AT SANDSTON.

'THE *Great Eastern*, sir, I suppose?' said the railway porter who shouldered Lord Harrogate's portmanteau, as soon as the few passengers for Sandston had been set down on the brick platform; and never having been in Sandston before, and perceiving by the man's confident tone that a voyager of his appearance was expected to put up at the gaunt new railway hotel that towered contiguous to the station, Lord Harrogate submitted to manifest destiny. There was a town omnibus, wherein Inspector Drew took his seat, and was borne rattling away to the *King's Arms Commercial Inn*, in company with other two second-class travellers, whose luggage mainly consisted of black sample-boxes strongly strapped; and then the majority of the gas-burners were turned down, since nobody else was to be looked for in Sandston, which lay on a loop-line, that night.

Early on the next morning Lord Harrogate was astir, and sallying out, made his way to the edge of the crumbling cliff on which stood Sandston, or more correctly, such portions of the old East Anglian borough as had not yet been swallowed up by the all-devouring sea, which heaved and growled, as though hungering for fresh conquests, at the foot of the friable sandstone rock that its waves beat against twice a day. Sandston, in monkish chronicle, is spoken of as a port of some note; but the same change in the coast-line that had swept away its parish church and two hundred roofs besides, had silted up the harbour, whence fifty barks used to set sail for the Baltic or the North Sea. A quiet, dull, dead-alive town, of a class not uncommon in the east and south of England, was Sandston of the grass-grown streets, lying amidst fens and sandy commons and shallow 'broads,' that were the shrunken remnants of huge meres, haunted by white-winged armadas of screaming wild-fowl, and thickets of alder and pollard willows, and windmills—quite a Dutch landscape; save that instead of cunningly constructed dikes, the land was guarded from the encroaching sea by the less sure defence of the soft cliff, that every year yielded up some yards of soil.

Some efforts had been made, once and again, to galvanise Sandston into life as a fashionable watering-place; and crescents and terraces, not seldom unfinished, and isolated villas in gardens screened from the salt breeze by tall hedges of the waving tamarisk, were dotted about. There were libraries, a bazaar, a penitential-looking row of bathing-machines, and other necessary adjuncts of a watering-place, inclusive of donkeys and Bath-chairs. But the frequenters of Sandston-on-Sea were few, and of a languid character, that contributed little to the animation of the spot.

There was a beauty, of a sort, about the place, when once the eyes and the mind had been



averted from the gaunt skeletons of the unfinished houses; the side-saddled donkeys drawn up in line with an array of goat-carriages and open flies, drawn by starveling steeds; the tawdry posters of 'the Great Bounce,' whose forthcoming entertainment of buffo-singing was to enliven the Assembly Rooms; and the other trite features of a bathing resort. The crags were low, and the caves with which the cliffs were honey-combed lacked the grandeur of the basaltic grottoes of Antrim; but the shapes they took were sufficiently wild and suggestive of smugglers' lairs and of earlier days, when more dangerous visitors than the fair trader were not uncommon on that exposed coast. Far and majestic rolled away to north and east the vast expanse of the German Ocean, smiling and dimpling in the sun, as it had smiled and dimpled a thousand years before, when the oar-blades of Danish pirates had tossed the diamond spray in air at every stroke, and the church bells had tolled, and the beacons been got ready on headland and down, to give warning that the Norse were near. The spreading sands were as smooth as a marble floor, mottled in places by the irregular mosaic of tinted pebbles, shells, and weed, and backed by dense beds of the hardy 'marum' grass, encouraged as the best of safeguards against the intruding sea. Lord Harrogate perhaps looked on all these things with an interest which an ordinary tourist could not have been expected to evince, in consideration of the fact that here had been spent the earlier years of her whom he loved. These wave-worn cliffs, this storm-beaten beach, this range of level sand, reached by flights of mouldering steps that led down from the steep cliff top—how often must Ethel Gray's eyes have rested on these objects, which he now beheld for the first time! For her sake, he viewed Sandston with a tolerant approval, in its picturesque and social aspects, which he might not otherwise have been sufficiently eclectic in his tastes to have extended towards it. He went back to his hotel, and having ordered and eaten his breakfast, went forth again, this time taking the hollow way, bordered by high paved foot-walks on each side, which led into the town.

There is a curious family likeness between these sleepy old English towns, which almost makes us feel familiar with a place so much akin to places we have known elsewhere. There are the same bright brass plates on the doors of the same garden-fronted houses of mellowed brick, to tell us how comfortably live the lawyer and the principal doctor, the local banker, and the miller, whose ornamental garden, with its weeping-willows overhanging the silvery mill-dam, is the prettiest sight to be seen on entering by the old London road. That dog reposing snugly on the sunny strip of pavement must surely be gifted with preternatural powers of somnolency, for you seem to remember him as sleeping thus confidently, in much such a spot, when you were a boy at school. The little shops, with their small-paned windows and low doorways, appear to offer buns and cattle-medicines and goose-quill pens and gown-pieces of the kind that were in demand some forty years ago. The coach will probably soon jolt in, bringing with it the day before yesterday's metropolitan gossip, and the shrill shriek of the locomotive is resented as an anachronism.

Lord Harrogate presently recalled to mind that

he had not journeyed to Sandston with archaeological intent, but on a quest that, he was aware, to eight out of ten of the men he knew on the Pall-Mall pavement or in the hunting-field, would appear quixotic. And he dreaded lest he should have allowed what he wished to overpower his usually clear intellect in this matter of the search for the supposed heiress of the De Veres. He was carrying on the hunt, as he knew, with quite other motives than the stern sense of justice which had prompted his earliest endeavours. Sir Sykes, innocent or guilty, had virtually passed beyond human jurisdiction. Earthly blame or praise could be as nothing to the half-animate creature on his couch of suffering at Carbery Chase.

But Lord Harrogate had of late permitted himself to hope that by a coincidence, strange but not impossible, a rainbow bridge might be flung across the gulf which separated his position in life from that of his sister's governess—that beautiful Ethel whose sweet face rose up so often before his mental gaze. He scarcely dared to acknowledge to himself his own thoughts, so well aware was he of the tendency to self-deception which is common to us all; but none the less did he feel spurred on by a double purpose as he pursued the inquiry on which he had entered.

At the corner of the narrow High Street, Lord Harrogate encountered Inspector Drew.

'You are early, my lord,' said the detective, carrying a ready fore-finger to his hat. 'But I have not had my eyes shut either, since they began to open places of business, specially in the licensed victualling line, here in Sandston. This ain't a place though for private conversation, my lord. I see heads peeping over half-a-dozen window blinds already, but Tontine Street here will answer better.'

Tontine Street indeed was lonely enough to have served for a rendezvous in which Talleyrand and Metternich and Pozzo di Borgo, suspicious statesmen as they were, might have conferred together without dread of diplomatic eavesdroppers. Six giant houses, empty, and with dabs of white paint in the centre of each of their blank windows, stood together on one side, and four on the other of this broad thoroughfare, in which the deep dust of sultry summer lay unscoured by hoof or wheel. Farther on, ghastly pits and miscellaneous mounds of rubbish told of toils left incomplete, contracts broken off, insolvency, neglect, decay. Whoever they were who supplied the capital for the commencement of this dreary Tontine Street, sorry was the harvest of profit which seemed likely to devolve upon 'the longest liver' of that speculative Company.

'You have been beating up the inns then, Mr Drew?' said Lord Harrogate, when he found himself, like the Last Man but One, amidst the ghostly echoes and solemn silences of Tontine Street. 'Have you had any success?'

'Well, my lord,' returned the inspector in a tone of expostulation, 'it's too soon to look for much of that. I'm not a sportsman myself—other fish, says your lordship, to fry—but I do believe the fox shews the stuff he's made of before he loses his brush, according to the coloured prints in a window in Waterloo Place, S.W., which taught me, atween ourselves, all I know about it. Now if this child we are looking for was brought here by a stranger or strangers, they

must, in reason, have put up at some house of public entertainment, more or less.'

'How, more or less?' asked Lord Harrogate with a smile.

'Why, my lord,' said the inspector, 'there's private lodgings, a deal safer in some respects, for those who have anything to hide and money in their pockets, than any hotel big or little. Parties in a hurry, however, don't often take lodgings right off, and when they do, they leave more trace behind 'em than they meant to leave. Then there are the common lodging-houses, ranging from three pence to six, where the accommodation's rough, I needn't say, but where it's a point of honour not to split upon a customer. Then we rise to the licensed to be drunk on the premises, which often keep "good beds" in an upper window; and then to publics calling themselves inns, and next to inns that ape at being hotels; and lastly, to hotels, and no mistake. That's about the total,' added the inspector, summing up.

'Which variety, to your mind, here in Sandston, appears the most likely?' demanded Lord Harrogate.

'Just what I've been turning over, and turning over this hour past,' said the detective candidly; 'and my lord, I do assure you I felt inclined to sky a halfpenny and stand by the toss, whether to try the *Robin Hood* or a much more gen-teel place of business, the *Dolphin*. The *Robin Hood* is a big public-house at the corner of Horsemarket Street yonder, and the folks who keep it don't look the sort who ask troublesome questions. Something of a smuggling flavour, of a mail-coach flavour, of a Blue House at electioneering times, there is about the *Robin Hood*. It is a tumble-down, roomy, seen-better-days kind of establishment, that might tempt queer people on a queer errand, certainly.'

'And the *Dolphin*?' asked Lord Harrogate, as his companion's discourse ended.

'Why, the *Dolphin*,' said the inspector, who was evidently an enthusiastic classifier of hotels, 'is just the very reverse of all that. Quiet, tidy, but maybe a little mouldy; it stands in Paston Street, just off the upper end of High Street, and has a big garden and a big courtyard, and stabling enough for a troop of cavalry. Depend on it, when the gentry of the neighbourhood used to come in to Sandston, once on a time, it was at the *Dolphin* they put up their carriages and ordered dinner, and a bottle of the blue seal and another of the yellow. I think you'll agree with me, my lord, that the likeliest cover to draw is the *Dolphin*, all things considered, and I think you'll guess why.'

Lord Harrogate merely nodded, however, in good-humoured assent; and the inspector, as he led the way up the steep and narrow High Street, the stony kernel whence had sprung the town, proceeded to answer his own question.

'If one of the parties was—as ten to one he was—a gentleman born and bred, he'd have felt more at his ease in a house that he could see was frequented by gentlefolks, my lord. Not only he'd have been sickened at the rags and the dirt and the bad air of the cheap travellers' houses and beer-shops, and so forth, but he'd have felt like a fish out of water in the *King's Arms*, where I put up. Bless you, I've known

those who were up to any game, till it came to soiling their fingers, or eating off a dirty plate, as one may say, and then they were at a dead-lock in a moment.—Here's the *Dolphin*, my lord; though we must not take it amiss if we don't learn much, after so many years.'

(To be continued.)

#### MAYNE REID'S PET SHEEP.

CAPTAIN MAYNE REID, the well-known writer of popular romances, who has for some time been residing on the Wye, near Ross, has got into a curious dispute with the Royal and Herefordshire Agricultural Society, concerning a pair of pet sheep with white faces and black wool, which the Society declined to exhibit among other kinds of stock at a prize-show. The rejection appears to have been on the ground, that the introduction of black sheep 'would at once materially reduce the value of that commodity, wool.' Into the general merits of the dispute we are not disposed to enter. As Lucius O'Trigger says, 'The quarrel is a very pretty quarrel as it stands, and we should only spoil it by trying to explain it.' Besides, the Captain is quite adequate to maintain his own cause. The subject, however, is so suggestive that it may bear some useful discussion.

Sheep, as we see them in Great Britain and the colonies, have usually white wool, of different degrees of fineness, according to the breed. But no one, we believe, will aver that sheep from the beginning of time have always been white. There is a breed in the mountainous parts of Scotland with black faces and black feet. It is seemingly an ancient breed, and differs in some respects from the whole of the ordinary breeds in different parts of the United Kingdom. The animals possess a certain independence of character; they can get a living where other sheep would starve; they can nibble and eat the prickly furze without hurt to their mouths, as would be the case with the more highly cultivated breeds from the plains. The wool of this black-faced variety of sheep, which is white, is rather coarse, but its mutton is renowned for its tenderness. Whether as springing from some early alliance with this old black-faced breed, or from other causes, it happens that occasionally lambs wholly black are dropped in flocks which are entirely white. Can it be that these are instances of casting back to some remote original? Captain Mayne Reid's pair of pet sheep with black wool but white faces may possibly be another variety of the same phenomenon.

To whatever cause the blackness may be due, it is certain that the casual appearance of a black-wooled sheep is viewed as a misfortune, for its fleece is less valuable than if it were pure white. Being less appreciated, the creature, from no fault of its own, is considered to be a kind of Pariah, and is in a sense to be pitied. Now, here a question presents itself. Is it quite right economically to degrade and stamp out black-wooled sheep? We allow that for most purposes white

wool is preferable to black, and that explains why white-wooled sheep alone are cultivated. But it would be worth while to inquire whether it might not be advantageous to try the rearing of a breed of sheep with black wool, with a view to certain kinds of manufacture. Nature can hardly be wrong. The black wool is no doubt sent for some useful purpose, if people would only think the matter over. Let it be understood that the term black wool is scarcely correct. The so-called black wool is, properly speaking, a darkish brown. It looks considerably more dark on the live animal than when it is spun and woven into cloth. This modification of colour we have verified.

About twenty years ago, we took a fancy to have an 'Inverness Cape,' a kind of cloak with loose covers for the arms, made from the fleeces of two black-wooled sheep, which browsed daily amidst a flock under our windows. We were determined to see how the manufacture of the wool in its purely natural state would turn out. Accordingly, the fleeces were shorn, washed, carded, spun, woven by a handloom weaver in our neighbourhood, and finally made by a tailor into the required garment. Since that time we have worn it every winter, and as a railway wrap it always accompanies us on our travels. Shrouded in it, we defy the coldest weather. The colour is brown, and as bright as the day it was first worn. It cannot change, as might be the case with wool dyed brown. The colour is inherent in the substance of the wool; and fifty years hence, if kept so long, it would still be unfaded. After making the cloak, there was cloth left sufficient for a lady's jacket, and it has worn equally well. In the caprices of fashion, gentlemen are fond of dressing in rough tweeds, the coarser seemingly the better. We have described a tweed, to call it so, which would undergo any amount of exposure to the atmosphere, and never alter in its original colour, even although worn to be threadbare.

Already, there has sprung up a trade in a coarse kind of hand-woven cloth, composed of brown and white wool, in divers patterns, sent for sale from the western and northern islands, and which, as we learn from a wholesale cloth-merchant, is beginning to rival, in a small way, the regular traffic in tweeds. This home-made insular cloth, produced by poor people in their cottages, resembles in strength of fabric and in durability the *Etoffe du Pays*, which one sees in travelling through Lower Canada. A knowledge of circumstances like these may perhaps help to give a new view of the capabilities of black-wooled (or more properly, brown-wooled) sheep; and it would not astonish us to learn that some enterprising stock-breeder, inspired by the manufacturers of tweeds, is prepared to make an experiment in raising the black sheep from its Pariah condition to the category of an animal specially valuable for its natural covering. We may perhaps live to see Agricultural Societies offering prizes for the best specimens of black sheep for purposes of breeding. If any good comes of trying to

produce a wholly black-wooled breed, we may have to compliment Captain Mayne Reid for agitating the question, by attempting to exhibit his two remarkable pets.  
W. C.

## THE HOUSE IN THE JUNGLE

IN FOUR CHAPTERS.

### CHAPTER IV.—SAVED.

TREMBLING all over, with the white lips and scared eyes of a guilty terror, Lorton made a miserable attempt at defiance.

'You are not the first man who would marry even a madwoman for money,' he sneered. 'That, I suppose, is what you mean by rescuing her out of my hands.'

'Happily for me, I am no penniless adventurer, seeking to make my fortunes by a rich marriage; neither,' added I with scornful emphasis, 'am I your son Stephen!'

'How dare you mention my son's name!' exclaimed the wretched man with some show of spirit. 'How dare you even insinuate that he, a brave honest soldier, serving his Queen and country, would seek to ally himself with a madwoman!'

'Then you still maintain that your niece is insane?'

'I do. She inherits it from her mother. See the proofs; she can tell you nothing that happened last year.'

'That is not very surprising,' retorted I coolly. 'Brain-fever would affect her memory. That scar over her left temple is a deep one.'

'She has had it ever since she was a child!' exclaimed Lorton boldly. 'She fell down some stone steps.'

'Excuse me; she fell down the companion-stair of the *Candace*.'

'Who told you so?'

'A fellow-passenger of yours: Mrs Francis Horley, my cousin, and the present owner of Vivian Clare's picture.'

Norris Lorton's white face grew several shades paler. I thought he was going to faint; but he recovered himself so far as to inquire in a hollow voice: 'Where did she get the picture from?'

'It was a present to her from her husband's father, Mr John Horley.'

Norris Lorton groaned again; his lips grew white as death; large drops stood on his brow; and I began to think there must be some other cause for his emotion beyond that which I had already discovered.

'Might I ask for a little brandy, Dr Stanmore?'

I ordered some for him; he drank about a wine-glassful of the raw spirit; it appeared to give him strength, for he staggered up and stood straight before me.

'Dr Stanmore, it is time for me to wish you good-night.'

'Wait, sir,' said I coldly; 'I have more to say to you still.'

Just at this moment my bearer came in with a note which he said one of Mr Lorton's servants had brought. Norris Lorton tore it open, hastily perused the contents, and sank back in his chair exhausted with emotion.

'It is all up,' murmured he; 'I am a lost man now.'



'What do you mean?' cried I.  
'Dr Stanmore,' pleaded he, 'I have been very wicked. I will confess; I will make reparation; only save me.'

'Save you!' echoed I. 'From whom? From what?'

'I cannot tell you unless you swear to help me.'

'How can I do that? I might be shielding you from just punishment. I do not know what new crime you may be guilty of.'

'Crime!' repeated he. 'Yes; it was a crime. But I have not injured you. Help me to hide myself.'

A horrid thought suddenly crossed my brain. 'Norris Lorton,' exclaimed I sternly, seizing him by the shoulder, 'answer me truly. Are you guilty of your niece's blood?'

'I am not!' exclaimed he vehemently. 'I swear it!'

I released him, feeling inexpressibly relieved, and remarked slowly and quietly: 'You are trying to evade the law. Speak! what have you done?'

'There is no time to lose,' said he piteously. 'Read that note.'

I did so. It ran thus: 'It is known that you are in hiding somewhere in Mooderland; they will be down to look for you almost as soon as you receive this warning. Fly at once.'

'There,' said he, as I finished reading, 'you see my danger. How am I to escape? They may be here already. Oh, what shall I do?'

'Tell me what you have done—why there is a warrant out against you.'

'No; I cannot. Help me, Dr Stanmore!'

'Now look here,' said I. 'You say they (by whom I conclude you mean the officers of justice) are after you. If they know you are in hiding somewhere in Mooderland, they will as a matter of course search the different houses, mine among the rest. You have but little time before you; make the most of it. Tell me your offence; and if I can do so without feeling that I am shielding a scoundrel from just punishment, I will help you.'

'Are you in earnest?' asked he feverishly.

'I am. You may put me to the proof, if you will.'

'It is not for murder they pursue me, but—but—I cannot tell you.'

'Then I cannot help you till you prove to me you are not the villain I now take you for.'

'Dr Stanmore,' said he slowly, 'ride home with me; I will tell you all on the way; we shall be safer in the jungle than here.'

I complied with this request, and ordered my horse Elaine.

'Let us go by the high-road,' said he, as we rode together out of the compound; 'no one will notice us. Is your mare fresh?'

'Not very; she had a long gallop this morning.'

We rode on in silence till we reached the first turning to the race-course, then I spoke.

'Now, Mr Lorton, tell me what it is you are guilty of?' I drew closer to him as I spoke.

All at once the treacherous villain raised the heavy whip he carried, and with all his force struck my mare across the loins. She bounded forward furiously, all the vice in her aroused by the blow, and began rearing and kicking to such an extent that it was all I could do to keep my seat; and when at last, after a sharp struggle, I succeeded in quieting her, Norris Lorton—who

had ridden off at full speed down the high-road to Calcutta—was completely out of sight. I at first thought of pursuing him; but a moment's reflection caused me to change my mind; and instead, I turned and rode swiftly across the race-course to the house in the jungle. The lights were still burning there as I reined in my panting steed before the door, and shouted to the servants slumbering on the steps. They stared in sleepy surprise at seeing me; still more so when I dismounted, bade one of them hold the mare, and ran into the house. 'Miss Lorton!' shouted I; and almost instantly she appeared.

She had altered during the last six months, had grown thinner and paler; and the expression of her features was more melancholy than ever.

'Oh, Dr Stanmore!' she exclaimed; and I could not help noticing with satisfaction that she looked glad to see me.

'Miss Lorton, listen! I believe the time of your escape has come. The detectives are after your uncle upon some charge or other; he has fled on horseback down the Calcutta high-road; and I have hastened here to see what I can do for you.'

'How did it all come about?' she asked, looking at me in utter bewilderment.

I related the events of the evening as briefly as possible. 'You must not remain here,' I concluded.

'Why? What am I to do?'

'That villain is fox enough, if he can elude his pursuers for a while, to slink back here, and carry you off, or else to send his son.—Hark! what is that?' There was a clatter of hoofs outside. I had not arrived a moment too soon; the next instant a young man, in military undress uniform, entered the room.

'It is Stephen!' cried Miss Lorton in dismay.

'Do not be afraid,' whispered I reassuringly; 'I will take care of you.'

'Who are you, and what are you doing here?'

'I am Dr Stanmore; you are Stephen Lorton,' was my cool reply. 'I am here as your cousin's friend. What are you here for?'

'To take her to her aunt's house in Calcutta.'

'Dr Stanmore, do not let me go,' pleaded the girl; 'they will kill me.'

'Have no fear.—You hear,' added I, turning haughtily to young Lorton, 'this lady is under my protection; the sooner you take yourself off the better.'

I will not attempt to describe Stephen Lorton's rage at this, nor repeat the language he made use of. He abused me in the most violent manner; and finally turned fiercely upon his cousin. 'As for you,' he stormed, 'fool, lunatic that you are, the asylum will henceforth be your home, as it should have been your mother's!'

My blood boiled at this cowardly insult far more than it had done at any of the abuse to myself. I could no longer control myself, and seizing the fellow by the collar before he well knew what was coming, I dragged him outside the house and kicked him down the steps, at the bottom of which he lay stunned and motionless. I then returned to Miss Lorton, whom I found cowering in a corner of the room, almost frightened to death.

'Come with me,' said I, taking her hand. 'Do not be afraid; I am your friend, you know.'

'Where will you take me?' asked she mechanically.

'To my house for the present. Put on something warm; the night-air is chilly.'

She disappeared into a side-room for a minute, then returned, wearing the opera-cloak and Turkish fez. 'I have nothing else,' she explained.

'It does not matter,' I replied, as we stepped out into the verandah. 'You have some distance to walk; shall you mind?'

'O no. But there is one thing: may I take Gyp?'

'Certainly you may. Where is he?'

She whistled, and the black collie came bounding up. I waited a moment as we passed Stephen Lorton, who was beginning to shew signs of returning consciousness; then, having satisfied myself that he was not dead, I gave my arm to Miss Lorton, and leading Elaine by the bridle, left for ever the house in the jungle. We walked slowly, and as the distance was considerable, the night was pretty far advanced by the time we arrived at my house.

'Now, Miss Lorton,' said I. 'You have trusted yourself entirely to me; will you do as I tell you?'

'Yes,' replied she simply. 'You know best.'

'Well, then, I went on; 'this house is yours for the present; my servants will have orders to obey you in everything. One of them can speak English; and you must tell him when you want anything.'

'And you?' inquired she.

'I am going down to Calcutta upon important business. There is a train in about half an hour's time, which I shall catch. I shall be back before long.'

There was little sleep for me that night, speeding along in the train to Calcutta, my brain in a perfect whirl of excitement from the events of the evening. It was about five A.M. when I reached my cousin's house. She was an early riser, and I had only an hour to wait before she appeared in her riding habit.

'What brings you here, Eustace?' asked she in amazement at seeing me. 'Is anything the matter? You look ill.'

'I have come to beg a favour of you,' said I; and then, without any further preamble, I told her the whole of Sibyl Lorton's history as it had been related to me; went on with a brief account of Norris Lorton's flight; of the scene with Stephen at the house in the jungle, and wound up by informing her that Miss Lorton was at my house, alone, and except for me, friendless. 'Will you not help her?' were my concluding words.

Geraldine Horley was impulsive and thoroughly kind-hearted. 'Eustace,' said she, 'you must return to Mooderaud as soon as possible, in order to guard against any fresh villainy on the part of Mr Lorton or his son. I will go with you.'

'Heaven bless you, Geraldine!'

'Listen!' she went on gravely. 'My conscience has often reproached me for not interesting myself in that poor girl when I first saw her. Now I will do my best to make up for that neglect.'

She was as good as her word. In another five hours' time we arrived at the Mooderaud railway station; a large crowd was gathered on the platform, and universal excitement prevailed.

'Caught at last!' the station-master exclaimed excitedly and incoherently.

'Who?' inquired I.

'He they have been after so long. There he stands.' And looking in the direction indicated, I saw, standing handcuffed between two detectives, Norris Lorton.

'Where are you going to take him?' I asked, making my way up to the group.

'To Calcutta,' replied one of the detectives; 'then on to England.'

'There is no train to Calcutta for an hour and a half,' said I. 'Will you bring him to my house for a short time? A relation of his is there.'

The men hesitated; but a promise of reward overcame their scruples, and they consented to grant me an interview with their prisoner. Arrived at my house, I introduced Mrs Horley to Miss Lorton, and leaving them together, repaired to the room known as my studio, into which the detectives and Norris Lorton were presently ushered.

'First of all,' said I, 'will you tell me the charge against Mr Lorton?'

'Theft, sir, and forgery,' was the reply. 'A nice job we have had to run him down.'

'A double charge. Who prosecutes?'

'For the theft, sir, Mr Vivian Clare; for the forgery, Mr John Horley.'

In all my life I have never been so completely taken aback as I was by this speech. I could do nothing but stand and stare in dumb amazement at the detectives and their prisoner.

'Perhaps you would like to hear the whole affair, sir,' said one of the former.

I nodded assent; and the man went on: 'It all began with the theft, sir. He stole an oil-painting belonging to Mr Clare; bribed the servant, it is supposed. That was not found out for some time; for Mr Clare got seriously hurt in an accident on the Metropolitan Railway, was taken to the nearest hospital, and did not know about its having been stolen. In the meantime, this fellow here sold the picture to Mr John Horley, a wealthy merchant, residing at Surbiton, and forged a cheque of his to the tune of some thousands.'

'Good gracious!' exclaimed I. 'But you have been a long time finding him out; have you not?'

'Well, yes sir, we have; but it was like this.'

Owing to Mr Clare's illness, the theft was not found out till long after the forgery; and Mr Lorton contrived to throw suspicion on his brother, who had died suddenly about that time. When Mr Clare got well again, he began about his picture, and he it was who first discovered we were on the wrong scent. A warrant was then made out against this fellow; but he had bolted of course. We had some trouble, as you may imagine, first in tracking him here, and then catching him; but it is done at last; and now he is safe for the next fourteen years.'

I looked at Norris Lorton with a horror and disgust I could not conceal. A common thief and forger; and Sibyl had been in his power so long; he had even tried to marry her to his son.

'Can you allow me a few minutes' private conversation with this man?' asked I. 'I know him well.'

After a little demur, the detectives consented, feeling certain that, being handcuffed, he could not escape, and withdrew to another room, where I had ordered breakfast to be prepared for them.

'Mr Lorton,' said I, 'you have not much time left before you leave this land for ever; the law



will not deal leniently with you; in all probability, I may never see your face again. Before you go, let me entreat you to make a full confession of your conduct to your niece.'

Norris Lorton raised his head and regarded me steadily. 'Dr Stanmore,' said he, 'you are a gentleman; you do not taunt a poor fellow when he is down: I do not mind telling you the truth. My niece is no more mad than you or I, and neither was her mother. She has told you her history, you say. Well, after that day they took her to X. Street, she had a severe attack of low nervous fever, and was for a time really off her head. Her father died suddenly when she was ill, and then I had to quit the country; you know why. My niece was then so far recovered as to be able to get up; but her mind was very feeble. I bribed the nurse in charge to secrecy; and gave the poor girl some drugged wine, which had the effect of stupefying her, so that she can remember nothing of the journey from London to Southampton. I got her on board just before the steamer started, so as to leave no time for awkward inquiries. During the voyage, I often heard the passengers speak of her as the "mad girl," and it used to please me. Then one rough day she fell down the companion and cut her head. You have seen the scar. She had slight brain-fever afterwards, which of course helped me out in my plans; but she got over it too quickly for my liking, and the day we landed at Calcutta I repeated the dose.'

'What do you mean?' cried I in horror.

'I mean,' continued he, 'that I gave her more drugged wine, just enough to make her look and walk as if she had no idea of what she was doing.'

It was on my lips to tell him in the bitterest terms what I thought of such wickedness; but his hands were chained: I bit my lips and was silent.

He went on: 'My son Stephen told me of the house in the jungle where you first saw me. I thought it a safe place for me to live in. My servants were all bribed to secrecy; one of them, who had been in my son's service for two or three years, acted as interpreter between me and the others, for I am no Bengalee or Hindustanee scholar; and there I lived in safety, hoping one day to see my niece become my son's wife.'

'How did you get here?' asked I.

'I came as far as Barah, the next station to this by rail; and then we took palkis [palanquins] the rest of the way.'

'One more question. Why did you enter your niece's name on the passengers' list as your daughter?'

'I hoped it would throw Vivian Clare off the scent. But it was a failure. Ah, well! I have had my day; now it is some one else's turn. Those detectives were too sharp; they set a trap for me by the railway, and another by the high-road. Stephen said he would go and carry Sibyl off, but I suppose you prevented him?'

'I did,' was the reply. 'Miss Lorton is in this house. Would you wish to see her once more?'

'In this house?' said he incredulously. 'Why—what?'

'She is under my protection and that of a lady who is staying here; my cousin Mrs Francis Horley.'

'John Horley's daughter-in-law?'

'The same.'

At this moment the detectives returning, respectfully informed me that it was time to start.

'Wait a minute,' I entreated; and without stopping to again ask Norris Lorton, I hastily left the room and summoned his niece. She came in slowly, looking pale and melancholy as usual. Seeing her uncle in handcuffs, she started violently. 'What has he done?' whispered she.

'He has broken the laws,' replied I. 'They will take him to England to be tried there.'

'One word,' she exclaimed. 'Is it on my account? If so, I will not prosecute.'

'No. It has nothing to do with his treatment of you.'

'Our time is up, sir,' pleaded one of the detectives.

'Good-bye, uncle,' said Miss Lorton, advancing towards the prisoner—a look of infinite compassion in her blue eyes. 'We may never meet again; say good-bye to me.'

Norris Lorton hung his head, and a crimson flush suffused his cheeks. I believe that for the first time since many a long year, a better feeling awoke in the man's bad selfish nature, and that for the time at least his humiliation was deep. 'Good-bye, girl,' said he hoarsely. 'I have wronged you shamefully. Stanmore knows all. Ask him. Forgive me!'

The young, innocent, and forgiving girl leant forward, the tears standing in her eyes, and kissed the criminal, her persecutor, upon the forehead. 'I forgive you, uncle,' she murmured. 'Good-bye.'

Then the detectives led him away, and we lost sight of him for ever. I afterwards heard that he pleaded 'guilty' at his trial, and was sentenced to fourteen years' penal servitude; but he died before the third year of his imprisonment had expired.

I have not much more to tell. The story of Norris Lorton's arrest upon the double charge of theft and forgery soon became public property. The English weekly papers were studied with unremitting attention, and it seemed to me that my neighbours regarded me rather as an accomplice in his crime, than as Sibyl Lorton's friend and protector; for they treated me with the utmost indifference and coldness, and would sneeringly remark 'that Dr Stanmore had an eye to a rich wife when he took Miss Lorton under his protection.'

My cousin Geraldine Horley took Miss Lorton to Calcutta with her to stay; there the latter rapidly improved in health, and the two ladies formed a friendship which has never been broken. Soon after their departure to Calcutta, I applied for three months' leave, and obtained it, though not without a great deal of demur and delay on the part of the authorities.

The reader can guess how I spent my holiday. I went to England by the quickest route; had a brief but happy meeting with many dear friends; and more than this, found out Vivian Clare.

I had not much trouble in doing so; a young friend of mine, likewise an artist, furnished me with his address, and I lost no time in repairing to him. I will not dwell upon our conversation. I related to him the events recorded in this chapter and the preceding ones: Sibyl Lorton's wrongs, her uncle's arrest, my cousin's kind protection of her.

'The two ladies are fast friends,' said I, 'but we must part them now. I speak professionally. Miss Lorton must return to England as soon as possible; her health will not stand the Indian climate.'

'My mother,' replied Clare, 'will receive her until the day when, as my wife, she will take her place in this house.' He pressed my hand warmly in his. 'God bless you, Dr Stanmore, for all your goodness to her!' he exclaimed earnestly. 'May He, in your need, send to you as true and noble a friend as you have been to me and mine!' And as I left his presence, the feeling arose in me that in the hour of my need I should find that friend in Vivian Clare.

A week after my return to India, Sibyl Lorton sailed for England. Geraldine Horley and I accompanied her as far as the steamer which was to bear her to the man she loved; and then we parted. My cousin was quite overcome.

'O Eustace,' she sobbed, 'I shall miss her so; I have grown so fond of her.'

I could not console her; I was too much in need of consolation myself. Should I never again look upon that sweet pale face, with its grave, melancholy blue eyes; never again hear that soft and voice, which had poured forth to me the tale of wrongs and sorrow, in the moonlight by the swift silent river? Something within me seemed to say: 'This parting is for ever!'

Some months after, we heard of her marriage with Vivian Clare; and letters came both to Geraldine and myself from her, telling us of her great happiness, whereat we both rejoiced.

I am not a young man now. I have known sorrow and sickness; I have been in foreign climes; I have experienced dangers by sea and by land; my life has been restless, full of trials; but I am contented now. In the place of my birth, the home of my childhood, among the lovely vales of Devonshire, I may hope to end my days in peace. The copy of 'The Death of Elaine,' at which I laboured so sedulously and with such success, hangs over the mantel-piece of my little sitting-room. Open that oak bureau that stands against the wall; press the secret spring; a drawer flies out. What is there? A miniature, painted on ivory, of Sibyl Lorton—I should say Sibyl Clare, for she sent it to me after her marriage with the artist. A packet of letters too, in her writing, amongst them the little scrap of paper in which she first implored my assistance; and a faded Turkish fez. These are the relics, all that is left to me of Sibyl Lorton, the only woman I ever loved, who has long since passed away into the far-off land! The parting in Calcutta was for ever in this world. Death overtook her all too soon. Perhaps in that land where partings and sorrow will be no more, I shall meet and know her again!

#### INGENIOUS RUSES.

THE 'famous civilian' Dr Dale, sent to Flanders by Queen Elizabeth on state business, finding his funds getting lower than he liked, adopted a shrewd plan of obtaining aid from his royal mistress without asking for it. With his despatches to the Secretary of State he forwarded two letters, one for the queen and one for his wife, carefully addressing that for the queen, 'To my dear Wife;' and that for his Kate, 'To Her most Excellent Majesty.' When Queen Bess opened her agent's epistle she was astonished at finding herself sweethearted, my-loved, and my-deared; made

acquainted with the state of his health and the emptiness of his purse; and was so heartily amused at the doctor's mistake, that she unloosed her purse-strings and relieved his necessity with unwonted liberality. If Dale was as astute in dealing with foreign princes as he was in managing his own liege lady, it is not to be wondered at that he was employed in diplomatic matters. When it was first proposed to send him to Flanders, the queen informed him she should allow him twenty shillings a day for his expenses. He did not think it enough; but keeping his thoughts to himself, replied, that in that case he should spend nineteen shillings a day. Elizabeth inquired what he would do with the other shilling. 'That,' said the doctor, 'I shall keep for my Kate and my boys Tom and Dick.' Her Majesty took the hint, and enlarged her negotiator's allowance.

Gretry was wont to employ a singular method of slackening or quickening the pace of a walking companion to suit his own inclination. 'To say,' he would argue, 'you walk too fast or too slow is unpolite; but to sing softly an air to the time of the walk of your companion, and then by degrees either to quicken the time or make it slower, is a stratagem as innocent as it is convenient.'—The principle of Gretry's ruse was well exemplified in the case of the stingy farmer who gave his hired haymaker buttermilk and whey for breakfast, and going to the field, heard the man singing in a drawing way:

B-u-t-t-e-r-m-i-l-k and whey,  
Faint all day, faint all day;

his scythe keeping time to the tune. The next morning the farmer set a good meal of bacon and eggs before the man; and when he went to see how he was getting on with his work, found his arms going swiftly to 'Bacon and eggs, take care of your legs!'

A debate in the House of Commons on the Peace Preservation Act, or some such measure, was enlivened by the relation of the following story. A Westmeath landed proprietor was so attached to field-sports that he turned a deaf ear to his daughter's entreaties, and could not be persuaded to take a house in Dublin where a gentleman abode in whom she was something more than interested. One fine morning the squire was astonished by the coming of a threatening letter, which he put in the fire; the next post brought another; and soon a third came, the last illustrated with a spirited sketch of a coffin. The recipient shewed them to the stipendiary magistrate, and before long a number of detectives were busy in the neighbourhood; but they could neither discover the senders of the objectionable missives nor stop fresh ones from pouring in with every mail. At last the threatened man gave in, and took himself and his family to Dublin, and before long found himself turned into a father-in-law. When the happy pair were about to leave, after the wedding breakfast, the bride, throwing her arms round his neck, said: 'Go home, father; no one will hurt a hair of your head. I wrote the threatening letters that scared you away. I wanted to come to Dublin, and as you would not

agree, I thought I would try the Ribbon scheme; and it succeeded.'

Had the wily damsel been taken to task for playing her sire such a scurvy trick, she would probably have pleaded that all is fair in love and war. Love, however, is a poor excuse for deception, while to cheat a foe, especially when that foe is an invader, is justifiable enough. During the Franco-German war, a couple of hundred Uhlans arrived in a Norman village. One of the peasants hurried to a neighbouring hamlet to warn a well-to-do farmer that he might expect a visit from the unwelcome raiders. The farmer was equal to the emergency. Calling his wife and daughters, all went to work with a will. Torn quilts, tattered petticoats, dilapidated gowns, were thrown over the backs of the cattle, enveloping them up to their horns; their feet and their heads were bound with straw; and then the sheep and goats were treated in the same fashion. Bottles of medicine were scattered about; a large trough was filled with water, and in its midst was placed an ample syringe. Up came the Uhlans; but at sight of the strangely attired animals and the monster squirt they hesitated. At last one of the troopers inquired what was the matter. 'The plague, that's all,' said the farmer. He had to answer no more questions; his visitors turned their horses' heads and galloped off at their best speed, to make requisition elsewhere.

For a less legitimate end did Patrick Murphy exercise his invention. Pat was a candidate for admission into the police force of a certain town, and his appearance before the Mayor was hailed with a cry from the crowd of would-be officers of, 'He can't write his name, yer Honour!' His Honour announced that he was only there to take down the names of those who wished to apply for the vacant situation, and told Murphy to come again that day fortnight.

'Now, Pat,' said a well-wisher, 'go home, and every night do you get a big piece of paper and a good stout pen, and keep writing your name. I'll set the copy for you.'

Pat obeyed instructions; and when the day came and the Mayor asked if he could write, boldly replied: 'Troth, an' it's meself that jist can.'

'Take that pen,' said the Mayor, 'and write—write your name.'

As Pat took up the pen, exclamations arose behind him. 'Pat's a-writing; he's got a quill in his fist!' cried one amazed rival. 'Small good will it do him; he can't write wid it,' cried another. They were dumfounded when Murphy recorded his name in a bold round hand and the Mayor declared 'That'll do;' but recovering from their surprise, two of them shouted out together: 'Ask him to write somebody else's name, yer Honour.'

'Write my name, Murphy,' said the Mayor.

'Write yer Honour's name!' exclaimed Pat.

'Me commit forgery, and goin' into the pollice! I can't do it, yer Honour!'

The Irishman's conscientious scruples were as opportunely improvised as the ear-ache afflicting Brougham, when engaged in an important case as junior counsel. His leader had been speaking for several hours, when he faltered suddenly and began to hesitate. Brougham rushed to the rescue. Putting on his face an expression of great suffer-

ing, he begged to address the court on a matter personal to himself, but felt sure their lordships would pardon the interruption if they knew the agony he was enduring in his right ear from the killing draught rushing through the door leading into the Common Pleas. Might he, in the interests of his clients, entreat the interposition of the bench? Their lordships expressed their sympathy for the sufferings of Mr Brougham, and ordered the door leading into the other court to be closed; but still the obnoxious draught came. Windows were examined and pulled about, until the martyr to ear-ache, seeing his leader had recovered himself, pronounced himself satisfied, and free from pain.

Sir Walter Scott talking to Rogers of his school-days, told him how he won his way to the top of his class by a bit of strategy. 'There was,' said Scott, 'a boy in my class who always stood at the top, nor could I with all my efforts supplant him. Day came after day and still he kept his place, do what I would. At length I observed that when a question was asked him he always fumbled with his fingers at a particular button on the lower part of his waistcoat. To remove it, therefore, became expedient in my eyes, and in an evil moment it was removed with a knife. Great was my anxiety to know the success of my measure. When the boy was next questioned, his fingers sought the button, but found it not; he looked down for it; it was to be no more seen than felt. He stood confounded, and I took possession of his place; nor did he ever recover it; or even, I believe, suspect who was the author of his wrong. Often in after-life has the sight of him smote me as I passed by him; and often have I resolved to make some reparation; but it ended in good resolutions.'

Scott certainly took a mean advantage of his school-mate's peculiarity, and did not deserve the success thus achieved. An equal but better deserved success rewarded the ingenious device of a physician having to deal with a very obstinate patient, whose weak point, or strong point, was his implacable Toryism. The patient was a west of England bishop. He had been very ill, and to expedite recovery his physician prescribed small doses of brandy, to be taken at regular intervals. Now the prelate hated brandy, and declared he would have none of it. In vain did the physician insist upon the duty he owed to his diocese, his wife, and his family; and when he suggested that his lordship had better make arrangements for his departure from this world, as without brandy he must die, the bishop calmly answered that he was prepared to die, but he would not touch the brandy. Walking up to the head of the bed, the doctor bent over the refractory man and whispered in his ear: 'Need I remind you that Russell is in office, and a *Whig* will be your successor to the bishopric!' 'Fetch the brandy, doctor!' cried the bishop; 'I'll drink a quart if necessary!' The ruse succeeded.

When Sir John Bowring was staying at Khan Shékuné, he heard so much about the beauty of the Sheikh's young wife, that his curiosity was excited, and he was filled with a desire to see what the bepraised lady was like. One day the Sheikh came to 'the Great Doctor' to entreat him



to cure his infant boy—the child of his old age and his lovely spouse. Sir John thought the opportunity too good to be lost, and readily agreed to do what he could for the little sufferer, but informed the Sheik that before he commenced operations it was indispensably necessary for him to see the baby's mother; he could not else prescribe for the child. The Sheik declared that to be impossible, as an unbeliever could not be introduced into the harem of one of the faithful. 'Then your child will die,' was Bowring's answer. The poor Sheik left in despair, but in the evening came again, saying the English doctor was very unkind, but that he would do anything to save the child's life, and that he would shew him the way to the harem. Rejoicing at the success of his ruse, Sir John was led into a room, where he saw a veiled woman bending over a poor emaciated child lying on a rug, his body covered with charms. He addressed the mother with some inquiries as to the symptoms, and then, artfully pretending he could not hear her perfectly enough to understand what she said, asked her to remove her veil. The lady demurred. The doctor insisted, observing that European physicians studied the diseases of children in the countenances of their mothers. At last she slowly raised her veil, when, instead of the angelic beauty he had expected, the cheated cheater was confronted with the face of a hideous dame, who said: 'I am the *old wife*!' while the Sheik laughed at the doctor's discomfiture.

Strategy is a thing to be admired when it is employed for the circumvention of rogues. While the French were in Mexico, stage-robberies on the Monterey road became very frequent. The French commander resolved to put a stop to them; and this is how he did it. He dressed up half-a-dozen Zouaves in ladies' attire, and sent them on in the next stage, their faces hidden by veils, their carbines hidden by their petticoats. The stage was stopped; the ladies, without waiting to be invited, left the vehicle, and fell into line with the rest of the passengers. Suddenly a series of reports came from that line, and some dozen robbers lay dead; the rest discreetly disappeared. For a long while afterwards it was only requisite to display a shawl and bonnet conspicuously to secure a free passage for a stage on that route.

Taking things for granted brought an illicit distiller to grief, after carrying on his illegal calling for years, under suspicion indeed, but nevertheless with complete immunity. M'Tavish rented a small farm in Glentartan, but the revenue officers never found any apparatus upon the premises, nor any of the necessary ingredients about the farm. Every nook and cranny of the neighbouring hills and dells was rigorously searched again and again, without any result save exposing the officers to the taunts of M'Tavish. Where this wonderfully concealed 'still' might be, was the question to which no answer was forthcoming. Dwellers in the glen of course had not the faintest notion of its whereabouts. One night an exciseman with two comrades knocked up the occupants of a farmhouse and demanded a horse and cart in the Queen's name, saying he had seized M'Tavish's illicit still with all its contents, and required assistance to carry the whole to headquarters. There was no resisting the

demand; horse and cart were soon ready, and a driver too. Getting into the cart with his assistants, the exciseman ordered the man to drive as fast as he could, without telling him where he wanted to be taken. Never dreaming but that the officer had previously discovered and seized the still, the man drove on, and pulled up at the concealed spot. Out jumped the exciseman; the entrance was burst open, and M'Tavish was a prisoner and his both emptied of its contents before he could comprehend how the misfortune had befallen him and his long-kept secret had been discovered.

Very cleverly too did M'Manus the Bow Street runner unearth a hidden burglar whom he suspected of having broken into a gentleman's house a few miles out of London. Going into a public-house 'used' by the man he wanted (Smith, let us call him), M'Manus got into conversation with the company, and by-and-by observed that he did not see Smith. It came out that that worthy had not been there since the day of the robbery. The runner next inquired at the different coach-offices, and found that a man resembling Smith had gone down to Oxford the day after the burglary had been committed. The next Oxford coach took him down to that town. Then getting himself very shabbily dressed, M'Manus next went round the outskirts of the town, and when he came to an inn, went in, saying: 'I want a pot of beer for Smith;' to be answered that they knew no such person there, and go his ways. At last his perseverance was rewarded by the reply: 'We'll send it.' 'No,' said M'Manus; 'that won't do; he's in a hurry, and I'm to go with you.' Go with the beer he did, found his man, and the stolen property in his possession. A capital ruse this.

A still shrewder trick was that played by an Oxford Professor, when a student came to tell him that he had lost or been robbed of a parcel of bank-notes. The Professor took down the numbers of the notes, and told the loser to keep his own counsel. Next morning, the walls were covered with bills proclaiming that such-and-such notes had been lost; but the crafty scholar had taken care to put imaginary numbers to them, and before many hours had elapsed, one of the lost notes was tendered at the bank; the truly advised teller gave the presenter into custody, and all the missing notes were recovered.

### THE ICE-BRIDGE.

In January 1871, with a large number of others, I stood upon the Durham Terrace, in the city of Quebec, the Gibraltar of America, and looked down on the mighty river St Lawrence. The thermometer had that morning marked a very low point; and all around there could be seen but the dazzling snow, covering city, plain, and mountain alike; while from the bosom of the great river rose a mist which wholly concealed its black waters from view. What could induce human beings, in such an extreme atmosphere, to pace up and down this exposed promenade, which in summer commands a view unrivalled in the whole world? The formation of the 'ice-bridge' was momentarily expected. The ferry steamers, whose traffic would be put a stop to by the ice-bridge, had been prevented leaving their wharfs under a penalty of heavy fines, and of being fired

into, by order of the authorities, were they to attempt to break it. Facing the bitter cold, all anxiously looked down upon the hidden stream, and vigorously paced up and down the snow-clad terrace.

Suddenly a cry was heard: 'It is taken.' Instantly all rushed to the railing and excitedly peered down upon the waters. Slowly the mist arose, and in its place appeared a smooth surface of dark-blue ice, extending far down the river to Indian Point, and up as far as the eye could reach. Under the cloud of mist, Nature had performed her work; in a few minutes had improvised a bridge out of the power of man to construct, a glorious crystal plane, as wonderful as it was beautiful. The opposite shore, which, up to within a few minutes, was almost unattainable, had been, as it were in a flash of time, brought into instant communication. Minute by minute the bridge was strengthening; the intense cold quickly thickened the ice; and in an hour after its 'taking,' a boy, in a sleigh drawn by a dog, ventured on its surface. As they progressed towards the opposite shore, a rumbling sound as of distant thunder rose from the river, for the thin ice was as a sounding-board; and even when the sleigh became as a speck, the rumbling sound continued reverberating between the opposing high lands. Then followed, as it seemed to me, fool-hardy skaters, who, venturing on the brittle surface, sped in sweeping circles hither and thither; then hundreds followed.

What a view the bridge presented! countless men luxuriating in the fascinating enjoyment of skating on virgin ice. It was barely more than an inch in thickness, and it appeared mad temerity to trust such fragility; but still the crowd increased, and its delirium grew wilder. Each moment, I knew, added to the general safety, yet every one had to keep separate from all others; for it was noticed that when three or four approached the same locality, the india-rubber-like ice sunk, as if it were ready to engulf the reckless pleasure-seekers.

On the wharfs and quays along the river-side were collected hundreds of on-lookers; so I descended, after my bird's-eye view, to have a closer inspection. Over the edge of the wharf upon which I stood was suspended a ladder, from the foot of which planks were laid on the ice, and by these the skaters gained access to the stronger ice beyond, strapping on their skates before descending the ladder. A continual row of people were venturing down shod with skates, and were soon eddying over the glassy surface. I watched one after another to discover if there were any show of bravado in their action, but there seemed to exist but the one feeling of anxiety and eagerness to join the river revel. Suddenly there was a tremor in the shining mass, and a paralysis seemed to strike on-lookers and skaters alike; the ice was moving, the bridge was breaking up. Instantly the skaters rushed towards the wharfs, rapidly they crossed the planks and scaled the ladders; many were immersed in the chilly waters, but all save one escaped a watery grave; his body was shortly recovered, and borne home to a disconsolate widow and her helpless orphans. The crystal bridge was a thing of the past, and an immortal soul was ushered into eternity.

The next morning's sun rose clear and bright, and shed its rays upon a night-formed bridge as pure and smooth as any mirror; the first had descended with the falling tide; but the works of Nature are rapidly carried out, and in its place another spanned the broad St Lawrence. Even now the venturesome skaters, careless of yesterday's memories, rushed wildly over its surface; and ice-boats in scores swept across it with amazing rapidity, their white sails reflecting back the sun's rays as the wings of sea-gulls. It was a gala festival, and men and women revelled in the rare enjoyment. From the city height it was a panorama, a kaleidoscopic view of changing forms of human beings, of boats, of vehicles. A bond of harmony and conviviality had been formed between the city of Quebec, Point Levis, the island of Orleans, Beauport, and other villages; and representatives from each place met in unison on the river plain, from which, midst the sound of ever-tinkling sleigh-bells, rose strains of music and the joyous shouts and merry laughter of men and women. Viewed from where I stood the ice-bridge was as a glass, everything on its surface being reflected in it; the steep cliffs of Levis threw their shadows on it as on a lake.

We—that is, myself and two friends, a bride and bridegroom of few days—were standing on the Durham Terrace, looking down upon this novel and exciting picture, and were carried away with an enthusiasm and a desire to join in the glorious carnival. Quickly we provided ourselves with skates, and descending to the Lower Town, soon found ourselves upon the ice. Near by was an ice-boat, ready to be chartered for a voyage to any part of the surrounding shores; so we closed a bargain with the master, and stepped into our conveyance. Voluminous buffalo-ropes lined with crimson were wrapped around us, and we felt as comfortable as though we sat before a parlour fire; our faces alone could tell how cold was the westerly breeze, which was now carrying us with the flight of a bird over the shining surface. Meeting similar craft was as a flash of lightning; and skaters and horses were distanced by us in every passing moment. Rapidly we passed up the river: on one side were the frowning battlements and citadel of Quebec, while on the other were the higher heights of Levis; and now we were beneath the Plains of Abraham, crowned by the monument of the illustrious Wolfe, rushing past the now desolate timber coves, which in summer are crowded with vessels, and which now shewed at the foot of the cliff the long line of the white-washed cottages of the hard-working lumbermen. On one side were the churches of St Columba de Sillery and St Augustine, and on the other of St Nicholas and New Liverpool, and then the Falls of the Chaudière.

We had swept upwards for over ten miles, when, with a slight twist of the tiller, our boat, with marvellous rapidity, was on the home-stretch. Again we passed villages, churches, and coves, and now and then a frozen-in vessel; then Quebec and Levis rose above our heads, and our bow pointed to where the Montmorenci Falls threw their vapoury column high into the rarefied atmosphere; already its cone had begun to form, and we could even see dark objects ascending and descending its slippery sides. Onward we swept, past the villages of Beauport, l'Ange Gardieu, and Château Richer;

when again we turned, and doubling le Bout de l'Isle d'Orleans, we stretched over towards the village of St Joseph de Levis, and skirted along the south shore of the St Lawrence, till we struck across to our starting-point, where we arrived after a wild ride of about forty miles, accomplished with marvellous speed. Owing to the circumscribed size of the 'cabin,' our limbs were somewhat stiff, and to recover the circulation of blood, we put on our skates.

No sooner had the steel touched the glistening ice than we felt the freedom of a liberated eagle; we seemed hardly to touch ice, but rather to be carried through air. Hundreds of skaters were gliding hither and thither; ice-boats with their white sails were sweeping upwards and downwards; and horses as if in delirium were galloping in every direction. I remained with my friend the bride, while her husband, impatient of our more tardy progress, forged ahead, we following as best we could, but not keeping up with his rapid movements. She, full of happiness and joy, glided along by my side, and I could see her proudly watching the movements of her loved one as he skillfully gyrated and executed difficult figures on the keen ice. Her loving eyes did not lose sight of him for a moment, and in human sympathy I rejoiced in her unalloyed happiness. Her glad expression shewed me that to her, love and life were synonymous. As I watched her, I was startled by her sudden look of intense horror. I turned my eyes in the direction which riveted her gaze, and saw nothing but the crowd of skaters. In a moment, however, there was a rush among them to a central spot, and loud cries; but my attention was diverted from them by a piercing shriek from the woman by my side. I had just time to catch her and prevent her falling, and was holding her in my arms, when I chanced to look at the ice beneath us, and there, under its cruel surface, in the death-cold water, swept down by the rushing tide, was the struggling form of her husband, vainly clutching and grasping, and striving to break through the icy fetters! As he passed beneath us, he gave one despairing look upwards, and was swept away for ever from our sight! Fortunately his young bride had fainted, and was mercifully spared that last agonised look. I conveyed her to her home, where for many a succeeding day and night, she lay on her couch the helpless prey of brain-fever, and from which couch she rose bereft of reason, to become the inmate of an asylum.

### THE MONTH:

#### SCIENCE AND ARTS.

MR JAMIN, of the Academy of Sciences, Paris, has embodied in a paper on Illumination by Electricity many particulars of interest to general readers. The Gramme machine, he says, and the Jablockhoff candle have made the application of electricity to purposes of illumination, a fact beyond doubt. The carbon-points of a powerful machine are equal to the sun in lustre. It is even possible that this limit may be overpassed, for our sun does not occupy the first position in the universe. It is a star already old, the cooling of which is much advanced, and whose yellowish light begins to approach that of terrestrial flames.

In quantity and quality the electric light greatly

exceeds all flames; and it is precisely this immense profusion of illuminating power that is regarded as objectionable. But nothing is easier than to reduce the lustre of the light to any degree that may be desired; it is only necessary to cover the arc with a large opalescent globe. This, while hiding the light, receives all the rays, and disperses them in the same way as if the globe itself were luminous.

A light to be applicable for purposes of illumination should contain the seven primitive colours of the spectrum in certain proportions. The flames of oil and gas do not contain the true proportions, which is the cause of their inferiority. The light from the carbons of the electric light is white; absolutely the same as that of the sun, and contains all the simple rays in the same proportions. It is complete and perfect, and replaces daylight without any modification. It is not the same with the arc itself, which is violet blue, and gives to electric illumination the bluish tint which has been objected to with reason. But it is a fault of excess, which can be remedied, for while the missing rays cannot be added to gaslight, the superfluous rays can be removed from the electric light. Uranium glass and many other substances furnish the means of suppression. This suppression is necessary in other respects, for the objectionable rays are said to attack the humours of the eye and to be the origin of grave diseases.

In ordinary combustion a large amount of heat is produced, and noxious products are thrown off; but the electric light does not vitiate the atmosphere, and makes very little heat, which every one will recognise as important merits.

The conditions of good electrical lighting must be determined by a study of the general illumination of objects during the day. When the sky is clouded, the sunlight pierces the clouds as through a ground glass, and the whole sky is like an immense illuminated ceiling, radiating light from every point and in all directions. The objects illuminated diffuse in their turn the light which they receive, so that there is an intercrossing of rays, producing the effect of a mean amount of light everywhere: this is *general illumination*, and is the model that must be followed. The ceilings, walls, and floors must be well illuminated, so that the diffused light may be radiated into the empty spaces; and that the quantity may be the same everywhere, it will be necessary to multiply the sources of light, and to cover all the openings by which it may escape.

The exterior light enters by the windows during the day, and it is by them that the nocturnal illumination escapes. When Mr Jablockhoff introduced electric lighting into the laboratory of the Sorbonne, the feeble effect it produced was astonishing. The building is covered with a glass roof, by which it is well lighted during the day, but which allowed the escape of at least one half of the light produced by the electric candles. This wasted light illuminated the high walls of the surrounding buildings, and gave a brilliant but useless illumination in the court. The experiment would have succeeded had the roof been covered with a thick white covering to throw down the light so prodigally wasted.

The same thing happens with gas, and will occur with electricity in the illumination of public places. All lamps waste half their light in radia-



tion towards the sky. A simple reflector would return it to the ground and double the illumination.

These conclusions have been tested, and visitors to Paris may now see there a street lighted by electricity, which, as described, is as clear and diffusive as moonlight.

Captain Abney, F.R.S., has undertaken a series of photographic experiments in which sensitive films are exposed to the action of the spectrum in different kinds of atmosphere. He finds as a general result that the image shews no signs of oxidation in atmospheres devoid of oxygen; that the limit of sensibility of the compounds used is lowered towards the least refrangible end of the spectrum; and that according to their composition and the atmosphere in which the experiments are carried on, solutions are sensitive to different parts of the spectrum.

Here the investigation touches the question of photography in natural colours, of which mention was made in our last Month. Captain Abney says: 'If silver sub-chloride or silver sub-bromide be produced chemically, we have a dark compound formed, which, if exposed to the action of the spectrum while in an oxidising solution (such as hydrogen peroxide) rapidly takes the colour of the rays acting upon it, the yellow being the least marked. The red, green, and blue are, however, particularly well rendered by reflected light, and the plate shews the colours as seen when a dull light is thrown on the slit of the spectroscope.' From this it will be understood that the investigation promises well for future discovery. The Captain's 'Notes' are published in the Proceedings of the Royal Society, Nos. 187, 188.

As some readers know, dynamite is made by mixing nitro-glycerine with a dry powdery earth, which by absorbing checks its tendency to explode. In nearly all instances the powdery earth consists of infusoria, organisms so minute that Ehrenberg calculated that in a cubic inch there were forty-one millions. Enormous deposits have been discovered in America; the city of Richmond is built on a stratum twenty feet thick which extends into the adjoining State of Maryland; Nevada has large deposits, and recently the infusorial earth has been found in the state of New Jersey. Some kinds are largely sold in the United States as 'Electrosilicon,' an excellent polishing powder; and we are informed by a communication to the Liverpool Geological Society that 'being a very poor conductor of heat, it forms a suitable covering for ice, beer-cellars, fireproof safes, steam-boilers, powder-magazines, and refrigerators. It is nearly five times lighter than dry earth, and only about half the weight of dry coal-ashes. It is not combustible, and remains unaffected by the hottest fire.'

It was thought that this infusorial earth would be valuable as a fertiliser for lands deficient in silica, and the experiment has been tried with complete success, for it was found that the tiny particles were carried into the substance of the wheat straw grown on the experimental field. The microscopist who made the discovery remarks: 'I look upon this application of vegetable silica to fertilising purposes as the most important adaptation of matter for the reproduction of vegetation that has ever been discovered.'

In a Report made to the *Société d'Encouragement*

*pour l'Industrie Nationale*, a description is given of a process by which chloride of methyl can be manufactured on so large a scale as to become available in commerce. The process, combining as it does scientific principles and ingenious adaptations, will interest chemists, and commend itself to numbers of persons, who will be glad to know that chloride of methyl can be retailed at four francs the kilogramme. To manufacturers of dyes and colours it offers a twofold advantage—moderate cost, and freedom from the risk of explosion that attends the use of nitrate of methyl.

Foreign journals report that experiments have been made at Langenschwalbach in Prussia with a view to utilise the fibre of the common nettle. It was found that when treated in the same way as hemp, the fibre came out as soft as silk and as strong as linen; and this result being regarded as encouraging, a large plantation of nettles has been made to provide material for experiments on a larger scale.

In a paper read before the American Philosophical Society, Philadelphia, interesting particulars are given of the progress of tree-planting in the United States, from which we gather that so far the results are satisfactory, especially in the treeless regions of the north-west. In Kansas and Nebraska, forest-growth is increasing rapidly from two causes—(1) 'the arrest of prairie-fires by cultivation, and the consequent spontaneous springing up on uncultivated portions of a thick growth of young trees; and (2) the planting of forests, now doubly stimulated by legislative encouragement and by assured profit. Besides which, the planter finds increased comfort; and it is claimed that a public benefit is already perceptible in a modification of the climate, particularly in the way of assuaging the severity of the once unimpeded winds.'

Minnesota has taken up the work with enthusiasm, and has already thousands of acres of young growing trees. In California, more than two hundred thousand of the Australian Eucalyptus have been planted; and the Central Pacific Railroad Company are about to plant eight hundred thousand more of the same kind in different places along their line of railway. Such being the initiatory results, we may safely predict that meteorologists of the next generation will have something to record concerning change and amelioration of climate in the United States.

William Penn's advice to his colonists was, in clearing their lands, to leave one acre in five covered with wood. A tabular statement of the proportions of forest remaining in different countries shews Portugal, 4.40 per cent.; Great Britain, 5; Denmark, 5.50; Spain, 5.52; Holland, 7.10; France, 16.79; Belgium, 18.52; Italy, 20.7; Germany, 26; Sweden, 60; and Norway, 66. There is an intimate connection between forests and water supply; and it is important that care should be taken to protect springs and the headwaters of rivers by judicious planting.

The almost unbearable sultriness of some weeks of summer in the United States, has occasioned many attempts at cooling the air of dwelling-houses, not one of which has as yet proved successful. Among the latest are the use of large quantities of ice to produce a chilly atmosphere and thereby temper the heat; and the employment of large air-pumps to compress the air up

to the point when it heats the vessel in which it is contained, then to allow a portion of the air to expand, which is accompanied by an immediate lowering of the temperature. This last is an entirely philosophical way of cooling, which might even be used for the manufacture of ice; but the great cost of working it would prove fatal to its adoption.

Mr De Rance of the Geological Survey has communicated a paper to the Manchester Geological Society, 'On the Palæozoic and Secondary Rocks of England as a Source of Water Supply for Towns and Districts,' which contains much useful information on a subject growing every year more important, inasmuch as the demand for water increases, while springs and rivers do not increase. Instances are given which shew how vast are the underground stores of water within the region occupied by the rocks above named. A spring at Barrow-in-Furness yields from a depth of two hundred and fifty feet, thirteen thousand five hundred gallons of water daily. Nearly three million gallons a day are pumped from a single well at Liverpool. Three-fourths of the seven million five hundred thousand gallons supplied daily to Birmingham is got from wells in the 'New Red,' and the water is described as 'of a uniformly excellent quality,' and the Perry well as 'one of the best waters for dietetic and domestic purposes' ever inspected by the Rivers Pollution Commissioners. Kidderminster has deep wells, one of which gives one hundred thousand gallons a day, and yet 'the domestic supply is entirely derived from dangerously polluted shallow wells and streams.'

It is worth remark that the towns with a hard-water supply have a lower death-rate than towns where the water is soft. In manufacturing districts the atmosphere is dirty, 'full of products of respiration of animal life, animal and vegetable waste and decay, and fumes of manufacturing processes, which, carried by the winds, hang suspended until condensation of moisture takes place, and are entangled in the minute globules of water-forming clouds.'

'Half a pint of rain-water often condenses out of three thousand three hundred and seventy-three cubic feet of air—the quantity of air a man would breathe in eight days, so that in drinking that quantity he swallows an amount of impurity that would reach his lungs from the air in eight days only.'

The well-water at Burton-on-Trent contains sulphate of lime, and to this it is believed the pre-eminence of Burton beer is due. The water on its way to the wells dissolves large quantities of gypsum from the rocks through which it passes; and Mr Griess, F.R.S., a chemist at Burton, states, that assuming the annual brewing of beer in the town to be one million four hundred thousand barrels, the quantity of gypsum contained therein and swallowed in various parts of the world will be three hundred and fifty thousand pounds.

At Oxford an artesian well 420 feet deep, bored in 1832, contains salines in abundance, 1277 grains per gallon, and in its 'large proportion of sulphates, most nearly resembles some of the German mineral waters, such as Friedrichshall and Rehme.' Compared with the Cheltenham water, it is nearly twice as rich in mineral constituents.

After a survey of the whole region, the reporter

says: 'From our traverse of the water-bearing strata of England, we arrive at the conclusion that several millions of our population live on areas capable of being supplied with immense stores of pure waters contained in the Permian and New Red Sandstones, the Lower and Great Oolites, the Greensand, and the Chalk, though this population is at present suffering all the ills resulting from a polluted water supply.' And that 'in the case of the Chalk in the valley of the Thames, great care should be exercised in extracting any large volume of water by means of deep wells from the underground springs, from the fact that these maintain the steady dry weather flow of the river, to which great damage might be done by any permanent lowering of the saturation line, like that which has taken place through excessive pumping in the metropolitan area.'

A correspondent furnishes the following testimony concerning the use of zinc in boilers:

'I had a piece of cast zinc weighing thirty-five and a half pounds suspended on an iron hook inside one of my boilers, a thirty horse-power. I have no hesitation in recording my conviction that the zinc has prevented the formation of new scale, and that it has tended to loosen the old scale.'

On the other hand, another correspondent informs us that zinc in contact with the metal of a boiler has an electro-chemical action, the result of which is that iron, being of the two metals the most affected by oxidation, finds itself perpetually attacked during the ebullition of the water. No shale or other foreign substance can, therefore, adhere to the boiler, which is thus kept clean. This cleanliness, however, our correspondent fears, may be at the expense of thinning or eating away the boiler-plates, a result of the electro-chemical action. He adds that the remedy is more disastrous than the evil; and that those who at first were enthusiastic supporters of zinc have now changed their views.

We take the earliest opportunity of laying this side of the question before our readers.

#### A TENDER MEMORY.

A little footstep pattering on the floor,  
A golden head laid gently on my knee;  
A shadow darkening all the earth and sky,  
And life is sad and desolate to me.

Sweet lips half parted in a peaceful smile;  
The light of God upon that baby brow;  
A hush upon the tiny waxen face—  
Our darling's but a tender mem'ry now.

Our grief nigh spent, we try to calmly think,  
To ask ourselves half sternly—Is it right  
That we should mourn that to eternal rest  
Her infant form was laid by us to-night?

In later years her footsteps might have turned  
Aside from paths that point the heavenly gate;  
Perchance she might have heard the awful words:  
'You cannot enter now—too late—too late.'

And, now? Ah, yes! our darling calmly sleeps:  
Earth holds for her nor hope, nor grief, nor loss:  
Another life has gained the pardon won  
With such deep pain upon the bitter cross.

C. R. CRESPI.

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